

Title (en)
METHOD FOR FORMING A BLACK-PASSIVATION LAYER ON A ZINC-IRON ALLOY AND BLACK-PASSIVATION COMPOSITION

Title (de)
VERFAHREN ZUR HERSTELLUNG EINER SCHWARZPASSIVIERUNGSSCHICHT AUF EINER ZINK-EISEN-LEGIERUNG UND SCHWARZPASSIVIERUNGSZUSAMMENSETZUNG

Title (fr)
PROCÉDÉ DE FORMATION D'UNE COUCHE DE PASSIVATION NOIRE SUR UN ALLIAGE DE FER-ZINC ET COMPOSITION DE PASSIVATION NOIRE

Publication
EP 3889318 B1 20230201 (EN)

Application
EP 20167940 A 20200403

Priority
EP 20167940 A 20200403

Abstract (en)
[origin: EP3889318A1] The present inventions refers to a method for forming a black-passivation layer on a zinc-iron alloy of a substrate, a black-passivation composition for depositing a black-passivation layer on such, wherein the black-passivation composition comprises one or more than one blackening agent selected from the group consisting of formula (I) and formula (II) as described hereinafter, and a respective use of said blackening agents for blackening a zinc-iron alloy.

IPC 8 full level
C23C 22/34 (2006.01); **C23C 22/46** (2006.01); **C23C 22/73** (2006.01); **C23C 22/80** (2006.01); **C23C 22/83** (2006.01); **C23C 22/10** (2006.01)

CPC (source: EP KR US)
C23C 22/10 (2013.01 - US); **C23C 22/34** (2013.01 - EP KR US); **C23C 22/46** (2013.01 - EP KR); **C23C 22/73** (2013.01 - EP); **C23C 22/80** (2013.01 - EP); **C23C 22/83** (2013.01 - EP); **C23C 22/10** (2013.01 - EP); **C23C 2222/10** (2013.01 - EP KR US)

Citation (examination)

- US 2004170848 A1 20040902 - LUDWIG ROBERT J [US], et al
- EP 0128862 A2 19841219 - CIBA GEIGY AG [CH]

Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)
EP 3889318 A1 20211006; EP 3889318 B1 20230201; BR 112022019448 A2 20221213; CA 3173505 A1 20211007; CN 115516134 A 20221223; CN 115516134 B 20240209; ES 2943158 T3 20230609; JP 2023520491 A 20230517; KR 20220163989 A 20221212; MX 2022012223 A 20230104; PL 3889318 T3 20230626; TW 202144617 A 20211201; TW I787775 B 20221221; US 2023160068 A1 20230525; WO 2021198429 A1 20211007

DOCDB simple family (application)
EP 20167940 A 20200403; BR 112022019448 A 20210401; CA 3173505 A 20210401; CN 202180031620 A 20210401; EP 2021058640 W 20210401; ES 20167940 T 20200403; JP 2022560113 A 20210401; KR 20227037534 A 20210401; MX 2022012223 A 20210401; PL 20167940 T 20200403; TW 110112063 A 20210401; US 202117916619 A 20210401